Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

HW#109: Intro to Functions   
Geometry

Due: Tuesday, April 12th, 2016

Failure to show your work will result in a LaSalle.

|  |  |
| --- | --- |
| Use this graph to answer questions 1-8.  John and his Father ran a 100 meter race. John started the race 3 seconds after his father. The graph below shows how far the two ran over time. | |
| 1. Who won the race? How do you know? | 2. If John’s distance from the starting line is represented by g(x) and the time is represented by x, find the following values (approximate.  a) g(5)  b) g(15) |
| 3. If John’s Father’s distance from the starting line is represented by *f*(*x*) and the time is represented by *x*, find the following values (approximate).   1. *f*(5) = 2. *f*(15) = | 4. Why do these lines not have arrows on the ends? |
| 5. Why do these lines not extend below the x-axis? | 6. The DOMAIN of a function is the set of all of the possible *x* values for that function (in this example, *time*).   1. What is the domain of g(x). 2. What is the domain of f(x)? |
| 7) The RANGE of a function is the set of all possible *y* values for that function (in this example, *distance from the starting line*).   1. Describe in words the range of *g*(x). 2. Describe in words the range of *f*(x). | 8) If we write *f*(x) = *g*(x), what value of *x* makes this true? What does this mean in terms of the race between John and his Father? |
| Use the graph below to answer questions 9-10.  Macintosh HD:Users:rmitrovich:Downloads:domain_range_close.jpg  C(x)= Cindy’s distance from the starting point  K(x)= Kelly’s distance from the starting point | |
| 9) Write the domain and the range for both C(x) and K(x). | 10) Who won the race? How does this connect to the domain? |